



## Sea-level rise caused by climate change and its implications for society

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### Abstract:

Sea-level rise is a major effect of climate change. It has drawn international attention, because higher sea levels in the future would cause serious impacts in various parts of the world. There are questions associated with sea-level rise which science needs to answer. To what extent did climate change contribute to sea-level rise in the past? How much will global mean sea level increase in the future? How serious are the impacts of the anticipated sea-level rise likely to be, and can human society respond to them? This paper aims to answer these questions through a comprehensive review of the relevant literature. First, the present status of observed sea-level rise, analyses of its causes, and future projections are summarized. Then the impacts are examined along with other consequences of climate change, from both global and Japanese perspectives. Finally, responses to adverse impacts will be discussed in order to clarify the implications of the sea-level rise issue for human society.

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### Resource Description

#### Climate Scenario : ☒

specification of climate scenario (set of assumptions about future states related to climate)

Representative Concentration Pathway (RCP), Special Report on Emissions Scenarios (SRES)

**Special Report on Emissions Scenarios (SRES) Scenario:** SRES A1, SRES A2, SRES B1, SRES B2

#### Exposure : ☒

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Extreme Weather Event, Food/Water Quality, Human Conflict/Displacement, Sea Level Rise

**Extreme Weather Event:** Flooding, Hurricanes/Cyclones, Landslides

**Food/Water Quality:** Other Water Quality Issue

**Water Quality (other):** Salt Water Intrusion

#### Geographic Feature: ☒

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resource focuses on specific type of geography

Ocean/Coastal

## **Geographic Location:**

resource focuses on specific location

Global or Unspecified

## **Health Impact:**

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

## **Model/Methodology:**

type of model used or methodology development is a focus of resource

Other Projection Model/Methodology

**Other Projection Model/Methodology:** Review of Models

## **Resource Type:**

format or standard characteristic of resource

Review

## **Timescale:**

time period studied

Long-Term (>50 years)